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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,014	03/10/2004	Tae-ahn Jahng	559552000120	4949
25225 7590 02/04/2008 MORRISON & FOERSTER LLP 12531 HIGH BLUFF DRIVE SUITE 100 SAN DIEGO, CA 92130-2040			EXAMINER CUMBERLEDGE, JERRY L	
			ART UNIT 3733	PAPER NUMBER
			MAIL DATE 02/04/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/798,014		JAHNG, TAE-AHN	
	Examiner		Art Unit	
	Jerry Cumberledge		3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 15-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 15-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/21/2007; 01/04/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10 and 15-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul et al. (US Pat. 6,986,771 B2) in view of Globerman et al. (US Pat. 7,097,648 B1).

Paul et al. disclose a flexible connection unit for use in a spinal fixation device (abstract), comprising: a first bone coupling assembly (Fig. 23A, e.g. ref. 280)(column ; a second bone coupling assembly (Fig. 23A, e.g. ref. 270); and a longitudinal rod (Fig. 23A, ref. 260), including: a first end received by and coupled to a first bone coupling assembly (Fig. 23 A, near ref. 280); a second end (Fig. 23A, near ref. 270); and a center section located between and coupled to the first end and the second end (Fig. 23A, near ref. 260), the center section includes a plurality of grooves along at least a portion of the surface of the center section (Fig. 1, e.g. ref. 12), wherein the second bone coupling assembly is connected to the rod at a different location than the first bone coupling assembly (Fig. 23A). The rod is made from a material selected from the group consisting of: stainless steel, iron steel, titanium, titanium alloy and NITINOL (column 14, lines 46). The rod is tubular along a longitudinal section (column 5, lines 20-21). The grooves are cut toward a center longitudinal axis of the rod (Fig. 1, ref. 12). The rod is

solid along a longitudinal section (Fig. 23A) (column 14, lines 46). The rod is solid metal and the first end, the second end, and the center section are a monolith (Fig. 23A) and the rod is cylindrical in shape (Fig. 23A). The first end, the second end, and the center section are a monolith (Fig. 23).

Paul et al. disclose a connection unit for use in bony fixation, comprising: a first bone coupling assembly (Fig. 23A, e.g. ref. 280); and a longitudinal rod (Fig. 23A, ref. 260), including: a first end received by and coupled to a first bone coupling assembly (Fig. 23 A, near ref. 280); a second end (Fig. 23A, near ref. 270); and a center section (Fig. 23A, near ref. 260) located between and coupled to the first end and the second end (Fig. 23A), and the center section including a plurality of grooves along at least a portion of the surface of the center section (Fig. 1, e.g. ref. 12).

Paul et al. disclose a connection unit for use in bony fixation, comprising: a longitudinal rod (Fig. 23A, ref. 260), including: a first end (Fig. 23 A, near ref. 280); a second end (Fig. 23A, near ref. 270); and a center section (Fig. 23A, near ref. 260) located between and coupled to the first end and the second end (Fig. 23A), the center section including a plurality of grooves along at least a portion of the surface of the center section (Fig. 1, e.g. ref. 12); a first bone coupling assembly (Fig. 23A, e.g. ref. 280) connected to the rod, the first bone coupling assembly capable of securing the rod to a bone structure of a patient (Fig. 23A); and a second bone coupling assembly (Fig. 23A, e.g. ref. 270) connected to the rod at a different location than the first bone coupling assembly (Fig. 23A), the second bone coupling assembly capable of securing

the rod to a bone structure of the patient at a different location from the first coupling assembly (Fig. 23 A).

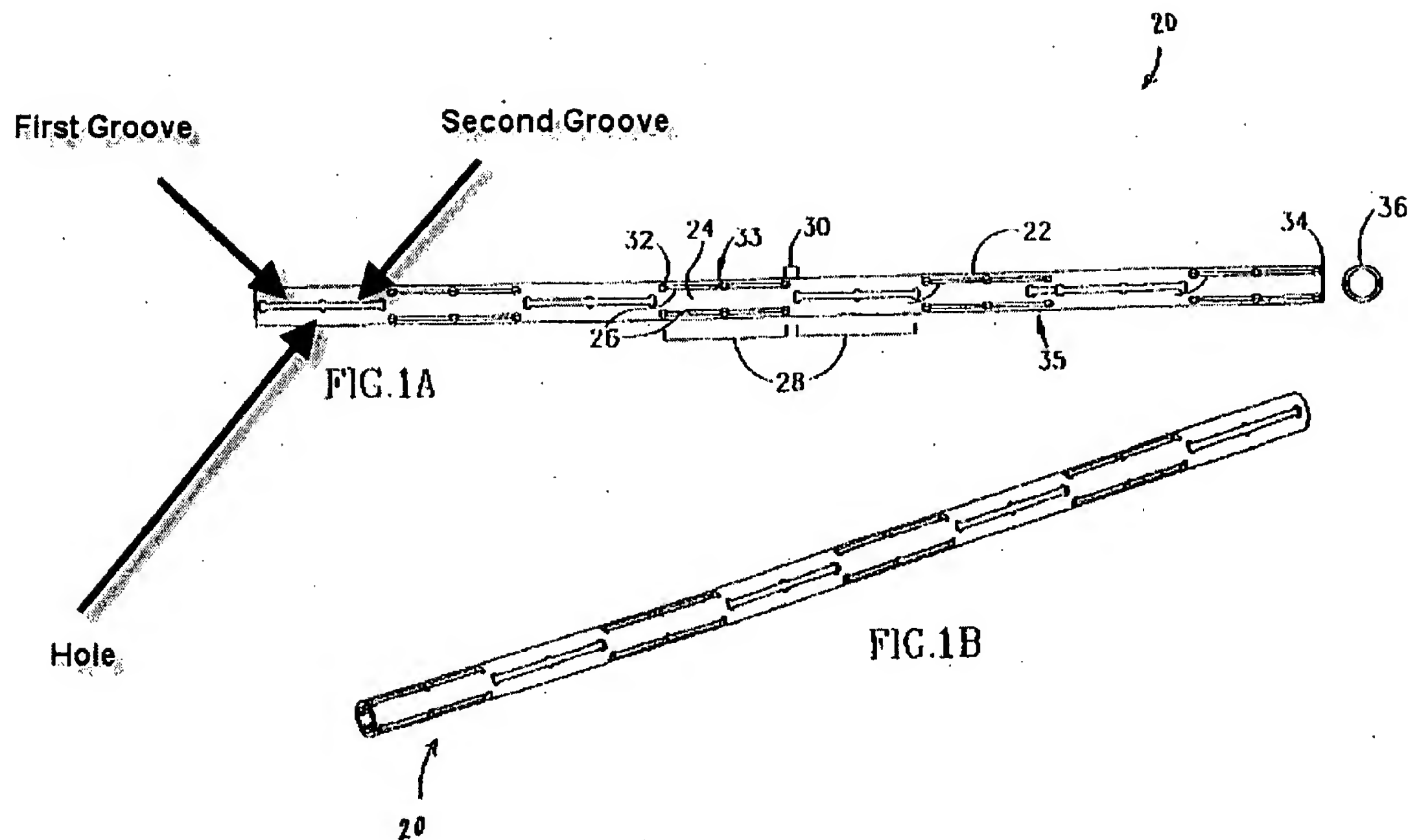
Paul et al. disclose the claimed invention except for at least two of the plurality of grooves directly coupled on the center section surface by an hole, and the hole at least twice as wide as the coupled grooves average width. The flexible connection unit further includes a plurality of transverse tunnels formed within at least a portion of the solid longitudinal section and wherein each tunnel coincides with at least one hole. Each transverse tunnel passes through a center longitudinal axis of the cylindrical rod such that openings for each respective transverse tunnel are located on opposite sides of the cylindrical wall of the rod and coincides with at least one hole. Each of said plurality of transverse tunnels have an internal diameter between 0.2 and 3 millimeters.

Globerman et al. disclose a flexible member (Fig. 1A, ref. 20)(Fig. 1C) at least two of the plurality of grooves directly coupled on the center section surface by a hole (Fig. 1A, below). The flexible connection unit further includes a plurality of transverse tunnels formed within at least a portion of the solid longitudinal section and wherein each tunnel coincides with at least one hole (Fig. 1A, Fig. 1C). Each transverse tunnel passes through a center longitudinal axis of the cylindrical rod such that openings for each respective transverse tunnel are located on opposite sides of the cylindrical wall of the rod and coincides with at least one hole (Fig. 1C). The holes are defined within the grooves in order to reduce the propagation of stress and/or mechanical failure in the rod (column 9, lines 16-19).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have constructed the rod of Paul et al. with grooves and holes as taught by Globerman et al., in order to reduce the propagation of stress and/or mechanical failure in the rod (column 9, lines 16-19).

Paul et al. in view of Globerman et al. disclose the claimed invention except for the hole being at least twice as wide as the coupled grooves average width. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the hole twice as wide as the coupled grooves, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Paul et al. in view of Globerman et al. disclose the claimed invention except for each of said plurality of transverse tunnels have an internal diameter between 0.2 and 3 millimeters. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed the plurality of transverse tunnels having an internal diameter between 0.2 and 3 millimeters, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.



Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Cumberledge whose telephone number is (571) 272-2289. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLC

